

## (12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
25 November 2004 (25.11.2004)

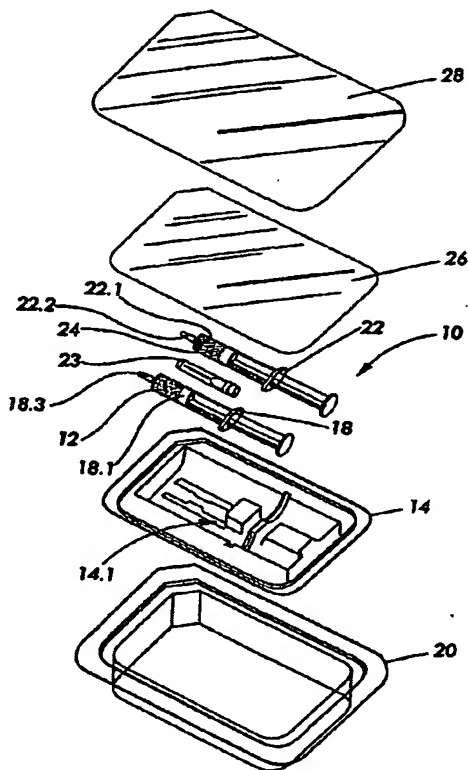
PCT

(10) International Publication Number  
**WO 2004/101016 A1**

- (51) International Patent Classification<sup>7</sup>: **A61L 31/04** (74) Agent: D M KISCH INC; P O Box 781218, 2146 SAND-  
TON (ZA).
- (21) International Application Number: **PCT/IB2004/050736** (81) Designated States (unless otherwise indicated, for every  
kind of national protection available): AE, AG, AL, AM,  
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,  
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,  
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,  
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,  
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,  
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,  
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,  
ZW.
- (22) International Filing Date: **18 May 2004 (18.05.2004)** (84) Designated States (unless otherwise indicated, for every  
kind of regional protection available): ARIPO (BW, GH,  
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,  
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI,  
FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,
- (25) Filing Language: **English**
- (26) Publication Language: **English**
- (30) Priority Data: **2003/1344** **19 May 2003 (19.05.2003)** **ZA**
- (71) Applicant (for all designated States except US): **DE VIL-  
LIERS, Malan [ZA/ZA]; 5 Touleieroord, Wapadrand,  
0050 Pretoria (ZA).**
- (71) Applicant and
- (72) Inventor: **DU PLESSIS, Tjaart Andries [ZA/ZA]; 298  
Stokkiesdraai, Erasmusrand, 0181 Pretoria (ZA).**

[Continued on next page]

(54) Title: **PREPARATION OF AN OSTEOINDUCTIVE AGENT**



(57) **Abstract:** This invention relates to a method for the preparation of an osteoinductive agent, the use of such an agent, and to a kit for preparing such an agent. This invention further relates to the use of the said kit in the preparation and dispensing of such an osteoinductive agent in a method of reconstructive bone surgery. The kit includes an osteoinductive agent comprising a modified naturally occurring biocompatible biopolymer which was subjected, in the solid, or dry state, to a source of ionising radiation in the presence of a mediating gas and annealed in the absence of oxygen at a temperature of from 40°C to 120°C to render the product in a dry particulate form, the product being disposed in a hermetically sealed container containing oxygen-free gas.